

Work Order ID 82548 -1

82548

April 13th

Page 1

Monday, April 02, 2012 3:45:06 PM

Item ID: D3690-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Glareshield
 Start Date: 4/2/2012 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 4/17/2012 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: Date: 4-2-12 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3690	Rev C

100 0.00
 100 HAND FINISHING THERMOFORMING
 Thermoform Memo 0.00
 Thermoforming Machine Set up machine frame and program as per Folio FTA 019

x4

DL
12/07/10

110 0.00
 110 HAND FINISHING THERMOFORMING
 Thermoform Memo 0.00
 Thermoforming Machine Cut Blanks to fit frame size 69.5" X 35.5"

x4

DL
12/07/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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Stop ***NS2***

Item Name: Glareshield

Start Date: 4/2/2012 Start Qty: 2.00

2

Cust Item ID:

Required Date: 4/17/2012 Req'd Qty: 2.00

2

Customer:

Reference:

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QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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115

115

HandThermo

Hand Finishing Thermoforming

Dry Material

Memo

Dry Sheet as per QSI022 POLYCARBONATE

Temp: 240° F

Time IN: 7:00 pm

Time OUT: 6:00 am

0.00

0.00

0.00

120

120

Thermoform

Thermoforming Machine

THERMOFORMING MACHINE

Memo

Thermoform as per Dwg. D3690-1and Folio FTA 019 Dwg. Rev.
C Folio Rev. C

0.00

130

130

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

Visually inspect for proper formation of each part

0.00

0.00

84

84

(X4)

DL

12/04/10

DL

12/04/10

B 12/04/10

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N900040100

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Stop *NS2*

Start Date: 4/2/2012 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 4/17/2012 **Req'd Qty:** 2.00 ***2***

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

150

0.00

150

Thermoform

Thermoforming Machine

HAND FINISHING THERMOFORMING

0.00

Memo

Trim to Finished Dimensions as per dwg D3690 using DT9036 / DT9043 template

160

QC2- Inspect parts off machine FAI/FAIB

0.00

160

QC

Quality Control

Memo

0.00

Check dimensions to ensure conformity to drawing tolerances.

Dart Aerospace Ltd

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N900040100

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NS1

Revision ID:

Stop

NS2

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Start Date: 4/2/2012 Start Qty: 2.00

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Cust Item ID:

Required Date: 4/17/2012 Req'd Qty: 2.00

2

Customer:

Reference:

Run Start

NR1

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC5- Inspect part completeness to step on W/O

0.00

170

QC

Memo

0.00

Quality Control

180

Identify as per dwg & Stock Location

0.00

180

Packaging

Memo

0.00

Packaging

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

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NOTE: Date & initial all entries

Picklist Print

Monday, April 02, 2012 3:44:18 PM

Page 1

Work Order ID: 82548

82548

Parent Item: D3690-1

D3690-1

Parent Item Name: Glareshield

Start Date: 4/2/2012

Required Date: 4/17/2012

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev A New Issue 08/04/28 DL verified by:DD
IPP Rev:B 08-07-14 revB as per dwg DD verified by:ec
IPP Rev:C 08-10-07 revC as per dwg DD verified by:EC lpp Rev. D
Add Step 115 Dry Material 10/04/21 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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MLEXS.093-F6006-02

Purchased

No

sf

447.3475

52.64632

MI FXS 093-F6006-02

**

GE PLASTICS LEXAN SHEET

Location

Loc Qty

Loc Code

therm

447.3474879

106751

97.9159079

110877

349.43158

105.3 sg ft

OK
12/04/12

W/O:		WORK ORDER CHANGES					
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DART AEROSPACE LTD		Work Order:	82548
Description: Glareshield		Part Number:	D3690-1
Inspection Dwg: D3690	Rev: C	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST
THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Shape Definition	✓			
Free of visual flaws (bumps, cracks, voids, etc.)	✓			

Measured by:	<i>[Signature]</i>	Date:	12/04/10
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TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.20	+/-0.030	2.21"	✓		VERA DL-02	
3.55	+/-0.030	3.57"	✓		VERA DL-02	
0.040	Min	0.045"	✓		VERA DL-02	

Measured by:	<i>[Signature]</i>	Date:	12/04/11
Audited by:	<i>[Signature]</i>	Date:	12/04/12
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	08.09.12	New Issue	KJ/DL	<i>[Signature]</i>
B	10.11.17	Dwg Rev updated	KJ	<i>[Signature]</i>

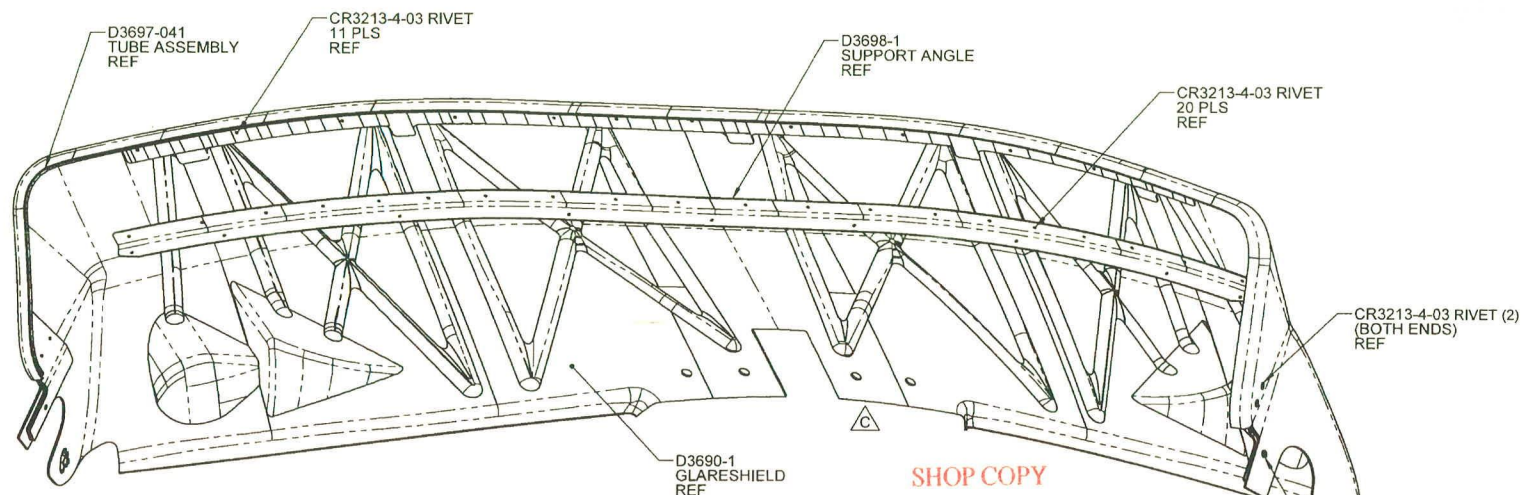
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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 82548 MLJ
12/04/02

RELEASE
28-09-14

PART LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3690-041	GLARESHIELD ASSEMBLY
1	D3690-1	GLARESHIELD
1	D3697-041	TUBE ASSEMBLY
1	D3698-1	SUPPORT ANGLE
2	AN960JD3	WASHER (OR NAS1149DN332J)
2	MS20426AD3-5	RIVET
35	CR3213-4-03	RIVET

D3690-041 GLARESHIELD ASSEMBLY

C	SHEET 1 PL MS20426AD3-5 RIVET WAS MS20426AD3-4, CR3213-4-03 RIVET WAS MS20470AD3-4, WASHER QTY WAS 6 (VIEWS UPDATED ACCORDINGLY). RIVETS ON SHEET 1 CHANGED TO REF QTY. RIVETS ON SHEET 2 CHANGED TO "HARD" CALLOUTS. SHADING REMOVED FROM ALL VIEWS FOR CLARITY.	AJS	08.09.02
B	ADD FINISH COAT & 1.0 TYP. SHEET 2 ZONES A, B & C, 5; ADD MIN THICKNESS. SHEET 3 ZONE A, B	RF	08.06.24
A	NEW ISSUE	RF	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D3690	SHEET 1 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GLARESHIELD ASSEMBLY	NTS
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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TRANSFER DRILL $\varnothing 0.128$
FROM D3698-1 TO D3690-1
INSTALL
CR3213-4-03 RIVET, 20 PL
RIVET HEAD ON GLARESHIELD
OUTSIDE SURFACE

D3690-1
GLARESHIELD
REF

TRANSFER DRILL $\varnothing 0.098$
FROM D3697-041 TO D3690-1
INSTALL
MS20426AD 3-5 RIVET
AN960JD3 WASHER (ON GLARESHIELD
OUTSIDE SURFACE)
1 PER SIDE

TRANSFER DRILL $\varnothing 0.128$
FROM D3697-041 TO D3690-1
INSTALL
CR3213-4-03 RIVET 2
BOTH ENDS

0.14
REF

SECTION A-A

EQUAL DIMENSION
AT BOTH ENDS

TRANSFER DRILL $\varnothing 0.128$
FROM D3697-041 TO D3690-1
INSTALL
CR3213-4-03 RIVET, 11 PL
RIVET HEAD ON GLARESHIELD
OUTSIDE SURFACE

TRANSFER DRILL $\varnothing 0.144$
AT THIS LOCATION
FROM D3697-041 TO D3690-1
(NO HARDWARE INSTALLED)

D3698-1
SUPPORT ANGLE
REF

D3690-041 GLARESHIELD ASSEMBLY

NOTES:

- 1) CENTER D3697-041 AND D3698-1 ON TO D3690-1
- 2) FINISH: PAINT D3690-041 ASSY FLAT BLACK USING BASF GLASURIT 22 LINE CODE SFA39.50 PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFICATION: ETCH WITH DART P/N D3690-041 & B/N ON INSIDE OF PART
- 5) WEIGHT: 2.98 lbs
- 6) MASK HATCHED AREAS (6 PLS) ON INSIDE OF THE PART PRIOR TO PAINTING

RELEASED
08-09-17

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3690	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		GLARESHIELD ASSEMBLY NTS	
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
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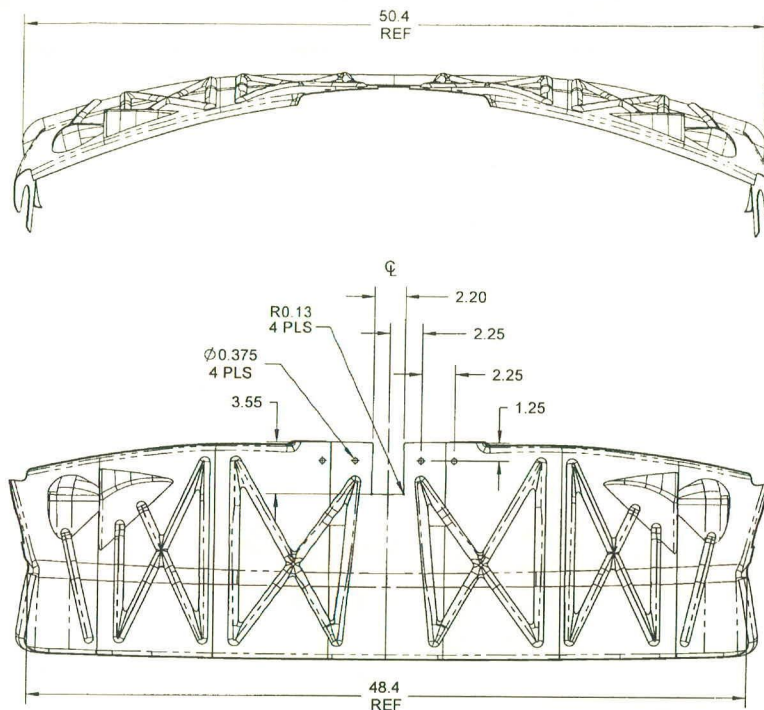
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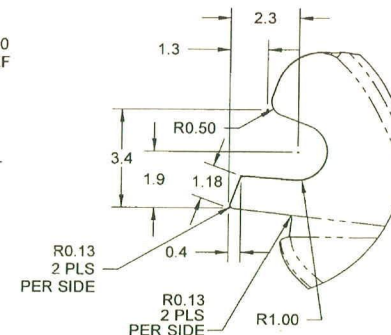
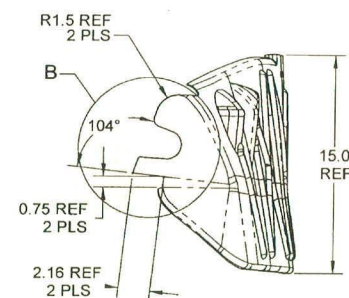
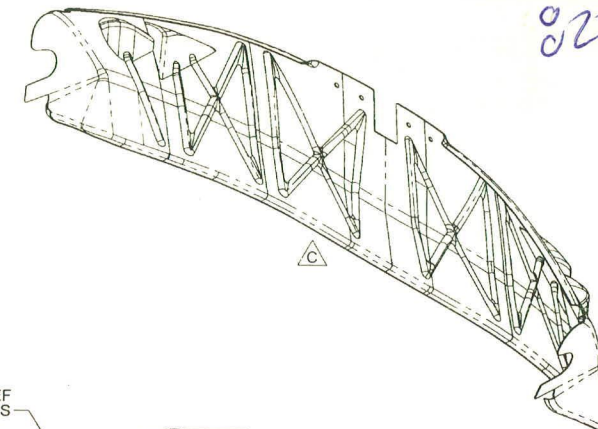
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D3690-1 GLARESHIELD







NOTES:

- 1) MATERIAL: F6006 SUEDE/POLISHED 701 BLACK FLAT LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS 093-F6006-02)
- 2) TOOLING: THERMOFORM PER MOLD DT9010 PER QSI 022
TRIM PER MOLD SCRIBE LINES EXCEPT WHERE NOTED
- 3) FINISH: NONE
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 2.5 lbs
- 9) MINIMUM THICKNESS AFTER FORMING IS 0.040

RELEASED
02.07.14

DETAILB
SCALE 2X
THIS VIEW FOR REFERENCE ONLY

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3690	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		GLARESHIELD ASSEMBLY	NTS
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